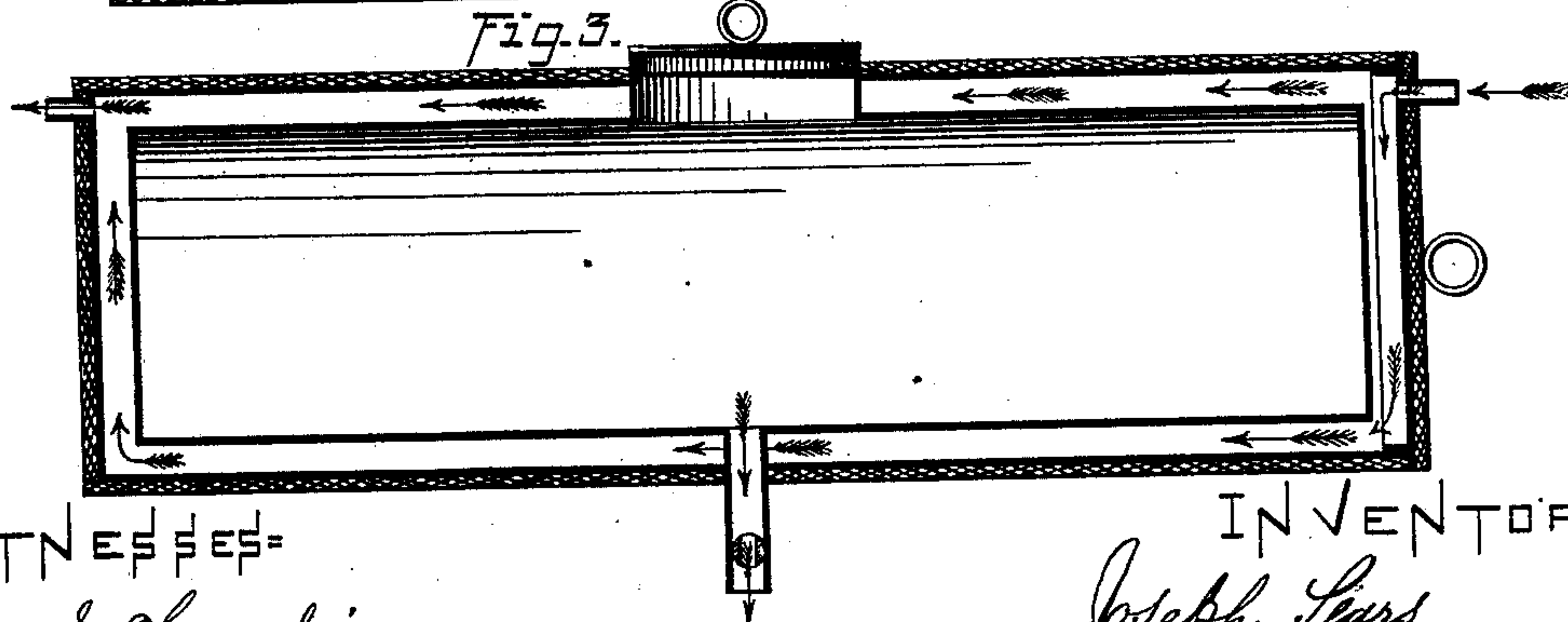
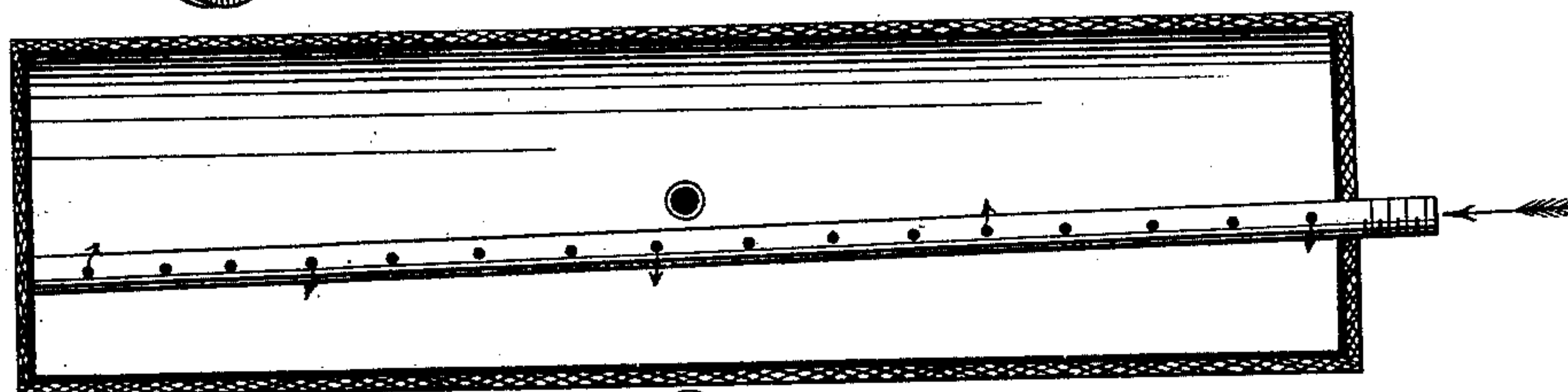
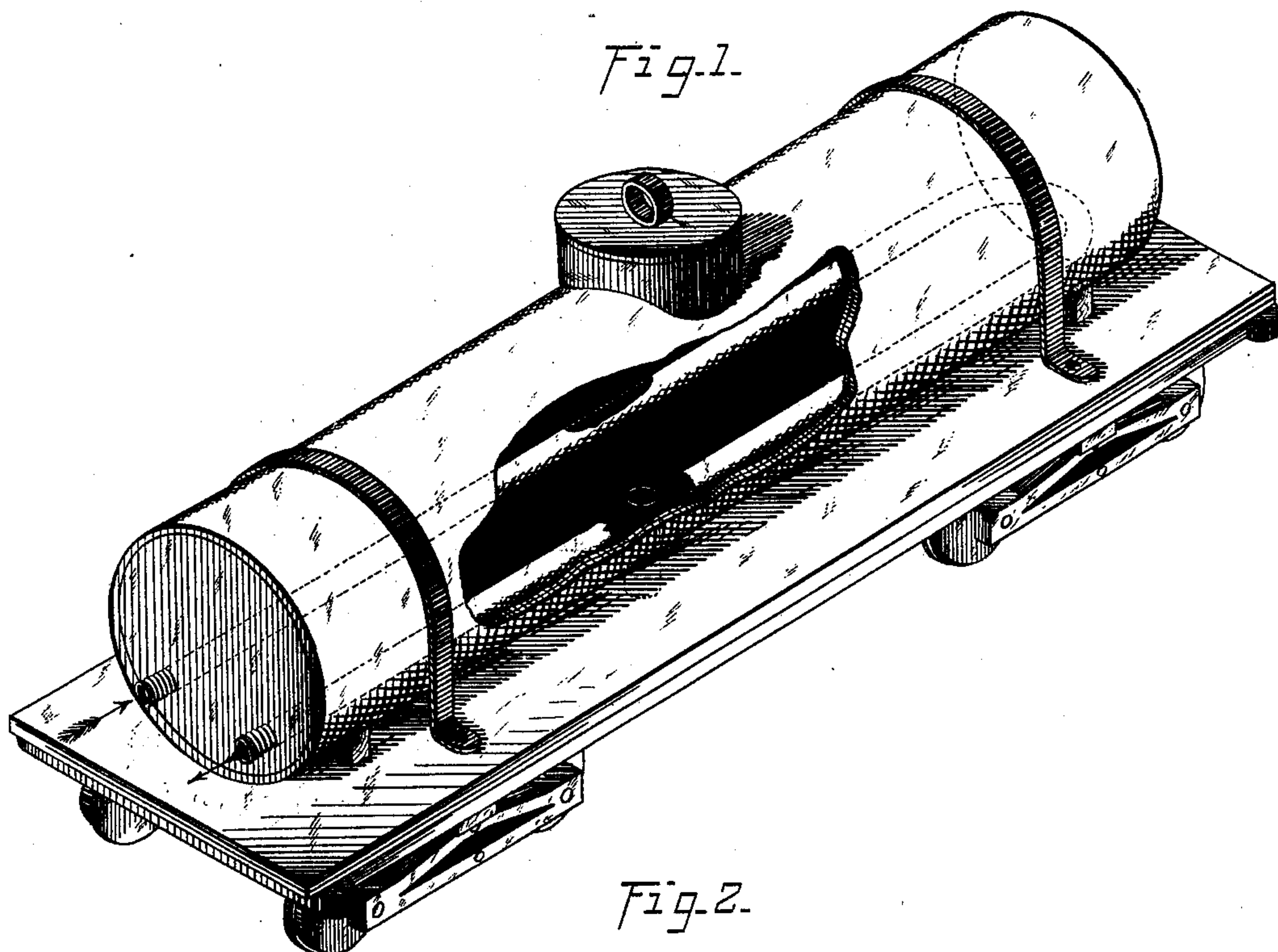


J. SEARS & W. H. BURNET.
Transporting and Delivering Lard in Large
Quantities.

No. 214,009.

Patented April 8, 1879.



WITNESSES=

Jas. C. Hutchinson
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 by John J. Halsted,
 their Atty.

UNITED STATES PATENT OFFICE

JOSEPH SEARS AND WILLIAM H. BURNET, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN TRANSPORTING AND DELIVERING LARD IN LARGE QUANTITIES.

Specification forming part of Letters Patent No. **214,009**, dated April 8, 1879; application filed October 16, 1878.

To all whom it may concern:

Be it known that we, JOSEPH SEARS and WILLIAM H. BURNET, of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in the Method of Transporting and Delivering Lard in Large Quantities; and we do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

Our invention relates to a novel method of transporting and delivering lard in bulk in large quantities, and with but little labor or loss.

Heretofore all lard for shipment in bulk has been packed in tierces; and these lard-tierces find their way into the hands of lard-refiners in various parts of this country, England, and the continent of Europe, and it is by them taken out of these tierces, refined, and then packed into smaller packages of various kinds and sizes, usually much smaller than the tierce—as, for instance, kegs, half-barrels, bladders, pails, tinnets, &c.; but this practice leaves the original tierces, often in very large numbers and demanding large storage room, on the hands of the refiner, to whom they are useless, and he is obliged to sell them at a mere nominal price at best.

Our invention is designed to supersede this expensive and wasteful practice, as also to avoid or dispense with the labor of handling, carting, and loading and unloading to and from cars, or from boats where the carriage is by water, of so many tierces, and it will be fully understood from the following description: We take the lard at the packing-houses in a fluid form, and run it into a tank-wagon, or into a tank-boat, or into a tank-car—such, for instance, as is used or adapted for the transportation of petroleum. After the car, vessel, boat, or other vehicle for transportation by water is filled with this fluid lard to the extent desired, the lard will, by reason of its nature, if allowed sufficient time and opportunity to cool, become solid; and as it cannot then, like a liquid, dash and surge about in the tank

during transportation, it is not a matter of importance or necessity in such case that the tank be absolutely full, but it may be filled to any degree desired. In this condition, then, the tank-car, with its contained lard, and a train composed of any number of such lard-loaded tanks can be transported to any point in the country accessible by rail, and any one or more of the cars left at its or their point of destination.

Having so arrived, instead of digging the lard out from the car, we have provided a simple and efficient mode of facilitating the delivery by either keeping the lard from solidifying or by again heating it to reduce the same to a fluid state, and then discharging the entire contents from the car to the receptacles provided for it, either by its own gravity, through an outlet in the car, or by means of any suitable pump.

The lard may be heated in the car in various ways to facilitate its discharge—as, for instance, the interior of the car may be lined with a steam-coil, (see Fig. 1,) and the car be provided with suitable connections, either flexible or rigid, whereby on arrival at its destination, it may be coupled with a steam pipe and steam turned into the coil, thus heating with confined steam. The lard will thus soon be melted and ready to be run off; or open steam may be discharged into the tank, (see Fig. 2,) whether the latter be provided with the interior coil or not, and this will effect a speedy melting; and as the lard is to be afterward treated or refined, the water of condensation commingled with the lard will not be objectionable; or hot air may be employed, as above, instead of steam, and in some cases the waste steam from the locomotive may be used for the melting; or a jacket-tank for steam, water, or hot air, may be inclosed in the car, with a stove or heating-coil next it; or the tank-car may be double-walled, as shown in Fig. 3, and hot air, steam, or water admitted between the walls to effect the melting; or the tank may be made like a boiler, with one or more flues running through it, and into which the heat may be admitted or supplied in any convenient way; or the car may be run into a room heated sufficiently to melt the lard.

Various other special means may be devised to effect the melting for the purpose of running off the lard from the car, and not necessary to be herein stated, as the object of the present application is not the protection of the mechanism, but of the new and improved mode of transportation and delivery. The mechanism is reserved for other and independent applications for patents, as we do not in the present application claim specific devices or mechanism, but the method or process only.

It will be evident that for canal or water transportation the same method is applicable, the vessel or any portion thereof being made as a tank, and heat being applied for melting the lard, which may then be discharged by pumping or otherwise.

The lard-containing tank may be inclosed in a non-conducting or partially non-conducting material, as shown in the drawings, to prevent the lard from solidifying; or double tanks, one within the other, with a space between them, may be used for the same purpose, this space being filled or supplied with steam or with air, either of which will act as a non-conducting jacket to retain the heat and prevent the cooling down and hardening of the lard.

We are aware that it has been proposed or practiced to fill a barrel with lard, convey the barrel to a vehicle, transport it to its destination, remove it from the vehicle, and then discharge the contents from the barrel; and we are also aware that petroleum and other substances which are liquid in form at ordinary temperatures of the air have been loaded, transported, and delivered from tank-vehicles. These, therefore, we do not claim; but

We claim—

The method of transporting lard, which consists in transferring the lard, in a fluid condition, into a receptacle loaded on or constituting a part of a vehicle, transporting the lard therein in a fluid or solid form, and delivering the same therefrom in a fluid state, all without removing the receptacle from the vehicle, as and for the purpose set forth.

JOSEPH SEARS.
WM. H. BURNET.

Witnesses:

HENRY MOREHOUSE,
JOHN C. LEWIS.